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ABSTRACT

This book describes a 1983 Unesco workshop held to review health-education teaching prepared by workshop participants. The document, developed primarily for educators in developing countries, includes the teaching materials in nutrition and health education for teachers of grades 1, 5, and 6, and for teacher educators. Chapter 1 of the document highlights the guidelines used by workshop participants in developing the teaching units. Chapter 2 lists the workshop's guidelines for revising and finalizing a health-education training manual for primary teachers in the Philippines. Chapter 3 summarizes plenary lectures and a panel discussion covering such topics as the philosophy and objectives of health education, phases of school health programs, teacher observation, and evaluation of health-education programs. Six teaching and training units, each one offered by a workshop participant, cover different aspects of health education, such as personal health, disease prevention, safety and first aid, substance abuse, consumer health, family health, and community health. Special emphasis is placed on nutrition education. Each unit follows a format that includes the following: (1) an overview; (2) objectives; (3) teaching methods; (4) suggested learning activities; (5) resource materials; (6) evaluation; and (7) a bibliography. (TES)

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APEID

Asia and the Pacific Programme
of Educational Innovation for Development

HEALTH AND NUTRITION EDUCATION

Report of a Regional Writing Workshop

PC 017830

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of Educational Innovation for Development

HEALTH AND NUTRITION EDUCATION

Report of a Regional Writing Workshop
Philippines, 12 - 27 May 1983

Unesco Regional Office
for Education in Asia and the Pacific
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INTRODUCTION

Background

In pursuance of Resolution No. 1/01 of the General Conference of Unesco adopted at its twenty-first session and as a follow-up of the Technical Working Group Meeting on Curriculum Development in Health and Nutrition Development convened by the Asian Programme of Educational Innovation for Development (APEID) in New Delhi, India, in September 1980, the Unesco/APEID Regional Writing Workshop on Health and Nutrition Education was held at the Benitez Memorial Centre, University of the Philippines, Quezon City, from 12 to 21 May 1983.

The Workshop was organized by the College of Education, University of the Philippines, in collaboration with the Ministry of Education, Culture and Sports, Unesco National Commission of the Philippines, and the Unesco Regional Office for Education in Asia and the Pacific, Bangkok.

Objectives

The overall objectives of the Workshop were: (i) to review the teaching and training units prepared by the participants; and (ii) to review and finalize the draft of the Training Manual in Health and Nutrition Education for Primary School Teachers developed by the U.P. College of Education, University of the Philippines, under contract with Unesco.

Participants

A total number of six participants, one each from Malaysia, Nepal, Sri Lanka and Thailand and two from the Philippines attended the Workshop. In addition, two Unesco officials and one resource person from the Philippines were invited to provide assistance in the deliberations of the Workshop. The list of participants, resource person and Unesco officials appears as Annex I of this Report.

Opening programme

Dean Paz G. Ramos of the College of Education, University of the Philippines, in her welcome remarks, stated that the problems of malnutrition are most acute today among developing countries of Asia where 75-85 per cent of the population belong to the lower class. Statistics also have shown that for every 10 people in this world, 7 go to bed hungry. In view of this, she stressed the need for health and nutrition education programmes that would effectively improve the health and nutrition education status and quality of life of people especially in Asian countries. Health and Nutrition Education is expected to increase understanding about the philosophy and science of individual and societal health; and increase competencies of the individual to make decisions about personal behaviour that will influence not only his own health but also that of his family, community and society. It is hoped therefore that this Regional Writing Workshop will be able to meet these expectations.

Dr. Evelina A. Mejillano, Director of the Workshop gave the participants an orientation about the background, objectives, content and process of the Workshop. She said that the Workshop is expected to produce two important outputs, namely, the teaching/training resource units prepared and improved by the participants, and the revised Training Manual in Health and Nutrition Education for Primary School Teachers.

Method of work

The Workshop lasted for ten days. Its activities were divided into three phases. Phase I was the presentation of the teaching/training resource units in health and nutrition education prepared by various participants. These units were then reviewed and improved in small groups composed of the author participant and two other participants serving as critics. They were later presented again at a plenary session and approved by the participants after suggestions for the improvement of these teaching/training resource units were incorporated.

Phase II of the Workshop consisted of the review and finalization of the Training Manual in Helath and Nutrition Education for Primary School Teachers prepared by the Department of Health Education, College of Education, University of the Philippines.

Phase III of the Workshop included the following activities: (i) lecture-discussion on the philosophy and objectives of health and nutrition education; (ii) panel discussion on the phases of the School Health Programme; (iii) demonstrations on values clarification and other teaching strategies; (iv) lecture-demonstration on evaluation in health and nutrition education; (v) lecture-discussion on the evaluation and use of visual aids; (vi) class

demonstration on a lesson in health and nutrition at the primary level (Lesson plan is in Annex II); and (viii) a field trip to the National Nutrition Council and the Nutrition Centre of the Philippines. A summary of the lectures and panel discussion presented in the Workshop appears as Chapter III of the Report.

Evaluation of the Workshop

A pre-Workshop survey was conducted on the opening day to determine the extent of the participants' interests in the content areas and instructional strategies in health and nutrition education. The findings of the survey guided the selection of the content areas and teaching strategies which were utilized during the lecture-demonstration activities of the Workshop.

Formal and non-formal techniques were used in evaluating the Workshop. The participants' perceptions of the 10-day Workshop were also monitored through an evaluation questionnaire which they filled up a day before the Workshop formally concluded.

Consideration and adoption of the Workshop report

During the concluding session of the Workshop, all the participants considered and adopted the Workshop report.

Chapter I

GUIDELINES FOR THE PREPARATION OF TEACHING/TRAINING RESOURCE UNITS IN HEALTH AND NUTRITION EDUCATION

This chapter highlights the general guidelines which were developed by the participants. The improved teaching and training units appear as Appendix A of this report.

General guidelines for reviewing a teaching unit

I. Format

A. Does the teaching unit contain the following?

1. Title
2. Introduction or Overview
3. Statement of Objectives
4. Content Outline
5. Suggested Learning Activities
6. Resource Aids and Materials
7. Evaluation Techniques
8. Bibliography for Teachers and Children

B. Is the teaching unit presented in such a way as to facilitate its use by the teacher?

C. Is the estimated time (in teaching periods) needed for the completion of the teaching unit indicated?

II. Organization

A. Title

1. Is the title clearly stated?
2. Is it challenging?
3. Is it interesting?
4. Is it broad enough?

B. Introduction or Overview

1. Does it provide an overview of the unit?
2. Does it indicate the reasons for the study or the importance of the unit?
3. Does it stress the significance of the unit in relation to the total School Health and Nutrition Programme?

C. Statement of Objectives

1. Are there general and specific objectives?
2. Are the specific objectives stated in behavioural terms?
3. Are the objectives comprehensive as to include knowledge, values, attitudes, and skills to be developed?
4. Are the objectives attainable?
5. Are the objectives worded as simply and clearly as possible?
6. Are the objectives measurable and easy to evaluate?
7. Are the objectives precise enough to indicate the kinds of learning experiences needed to attain different types of behaviour?

D. Content Outline

1. Is the content appropriate for the age level?
2. Is the content relevant to the needs, interests and problems of pupils?
3. Is the content based on real-life situations and experiences?
4. Is the subject matter to be developed outlined in logical sequence?

E. Suggested Learning Activities

Learning through experience is essential to effective health education, rather than simply being told things. The possibilities for active learning activities are vast. Children should learn in an active and practical way -- they should be encouraged to think, observe, explore and invent. Similarly, opportunities for linking health education learning-by-doing activities to the family and the community should be resorted to as much as possible. Children can conduct their own health/nutrition surveys in their homes and communities, perform nutrition and health-promoting tasks benefiting not only themselves but also their younger siblings and family as a whole.

1. Are there activities for introducing the unit, developing the unit, and culminating the unit?
2. Are the learning activities open-ended, i.e., do they encourage a variety of responses?

3. Are the learning activities based on established principles of learning?
4. Do the learning activities provide for individual differences?
5. Is there emphasis in the development of good health habits?
6. Are the activities meaningful and challenging?
7. Does the teaching unit provide frequent opportunities for value inquiry, clarification, and analysis?
8. Does the teaching unit provide a variety of activities to sustain pupil interest?
9. Can the activities be finished in the allotted time?
10. Are there activities that correspond with the content?
11. Does every learning activity serve a justifiable function related to specific objective/s?
12. Are the learning activities sequentially structured to provide for continuity in learning?
13. Is the teaching strategy appropriate for use with the class size?
14. Is there provision for students to apply what they have learned in one situation to other new and different situations?
15. Does the teaching strategy consider such factors as fatigue and attention span of the pupils?

F. Resource Aids and Materials

1. Are materials for teaching included?
2. Are audio-visual aids used whenever and wherever possible?
3. Is there provision for using community resources?
4. Are the materials inexpensive and easily available?

G. Evaluation Technique

1. Does it provide a variety of evaluation instruments?
2. Is there provision for evaluation outcomes that cannot be measured by paper and pencil tests?
3. Is there provision for different kinds of evaluation - diagnostic, formative and summative?

H. Bibliography for Teachers and Children

1. Does it include an up-to-date listing of books, pamphlets and other materials?
2. Are the books and pamphlets listed easily available?
3. Are these relevant to the region or local setting?

Chapter II

GUIDELINES FOR THE PREPARATION OF A TRAINING MANUAL IN HEALTH AND NUTRITION EDUCATION

An important phase of the Workshop was the review of a Training Manual in Health and Nutrition Education for Primary School Teachers which was developed by the Department of Health Education, College of Education, University of the Philippines, under contract with the Unesco Regional Office in Bangkok. In this Chapter are embodied the general guidelines which were approved by the participants and used as the bases for revising and finalizing the training manual which is a separate publication.

General guidelines for the selection of content materials for teacher educators in health and nutrition education

There is a vast quantity of existing content materials in Health and Nutrition Education as well as limitless possibilities for creating new content materials in these subject areas. Any guidelines that may be set up, therefore, should reflect positively the present-day philosophy of health and nutrition education. These guidelines likewise should apply to specific teaching objectives based on particular needs, interests and problems of the learners.

A. Content

1. Are the facts scientifically accurate and up-to-date?
2. Does the material present what needs to be taught?
3. Do the selection and arrangement of the material constitute good coverage for use in the pre-service/in-service training of teachers?
4. Are the ideas important, clearly expressed and easy to understand?
5. Does the material provide suggestions for further readings and activities which could help enrich and reinforce learning?
6. Is the health and nutrition information based on daily living experiences or real-life situations?
7. Does the material encourage independent study, discovery and further exploration by the teacher?

8. Has consideration been given to what the learner has gained from previous health and nutrition courses and to those courses scheduled to follow?

B. Psychological Values

1. Is the mixture of familiarity and newness such that it fosters growth?
2. Is the material easy to understand?

General guidelines for the selection of training strategies

The selection of training strategies should be based primarily upon training objectives and content which focus on learner needs, interests and problems. If focus is to be placed on learner's needs, interests and problems, then training strategies should emphasize a problem-solving approach. The trainees must gain a genuine understanding of health/nutrition problems, and their causes and consequences, in their communities through first-hand experience. This experience should train them how to observe the community, record, understand and clarify, diagnose, priority rank problems, propose appropriate learning objectives and effective teaching strategies.

Training strategies are considered as the means to an end. When they are related to instructional objectives, they serve to assist the learner to attain desired outcomes. The following guidelines may be useful in the selection of training strategies:

1. Is the training strategy acceptable bearing in mind the socio-cultural practices of the school and community?
2. Does the training strategy provide an opportunity for the learner to practice the behaviour specified in the objective?
3. Is the training strategy suited to the capabilities of the learner?
4. Does the training strategy allow for individual differences and abilities of the learner?
5. Is there a variety of training strategies used to meet the training objectives as well as to meet varying learner needs and interests?
6. Is the choice of training strategy based on the availability of materials, equipment, and physical facilities?
7. Is the content of the lesson considered when selecting the training strategy?
8. Is the training strategy based on the application of tried and tested principles of adult learning?
9. Is the training strategy based on consideration of strengths and weaknesses of a number of possibilities?
10. Is the training strategy satisfying and rewarding?

11. Whenever possible, does the training strategy involve the use of more than one sense?
12. Does the training strategy draw upon related ideas and experiences?
13. Does the training strategy encourage interaction between teacher educator/resource person and student, and among students?

General guidelines in the selection of evaluation instruments and techniques

Evaluation is a measurement of learning and training effectiveness. It indicates the direction of the training process. If evaluation is properly made and utilized, the trainer can determine whether training has been effective in bringing about learning and whether learning has been geared towards the attainment of formulated concepts and objectives.

The following are some criteria which may guide the selection of evaluation instruments and techniques:

1. Are these instruments and techniques used to assess health and nutrition knowledge, skills, values, attitudes and practices?
2. Do the evaluation instruments and techniques measure progress and improvement in the training process?
3. Are the evaluation instruments and techniques valid and reliable?
4. Is there a variety of evaluation instruments and techniques used?
5. Are the evaluation instruments and techniques related to the content and objectives?
6. Is evaluation a continuous process?
7. Are the results of evaluation used as a basis for future planning by the trainers and learners?
8. Does the use of the evaluation instruments and techniques determine the strengths and weaknesses of the various components of teaching?
9. Does the use of the evaluation instruments and techniques point out unmet needs?

Chapter III

SYNTHESIS OF THE LECTURES AND PANEL DISCUSSION PRESENTED IN THE WORKSHOP

Plenary sessions were held for the lectures and panel discussion on selected topics that aimed to further enrich the participants' interests in health and nutrition education. The summaries of these lectures and panel discussion is presented in this Chapter.

Philosophy and objectives of health education

Any statement of a philosophy of health education should be consistent with the social and political philosophy of the people. If it is a democratic ideology, it is basic that the health education programme should reflect the democratic way of life and should have no aims or practices at variance with the culture. A philosophy of health education cannot have a firm foundation unless it is based on sociology; it can never be divorced from the society it serves.

In the in-depth discussion of the underlying concept of health education, it was pointed out that in health education, we deal with a human entity - indivisible and whole, whose optimum development is the ultimate goal of education.

Health has different meanings for different people. However, a more widely accepted concept tends to view health as a quality of life involving the dynamic interaction and interdependence among the individual's physical, mental and emotional well-being and the social complex in which he lives. As a dynamic process, health is ever-changing and dependent upon multiple factors. Health is not a goal in itself but a means of attaining more specific goals and is determined by what we do and not by what we know.

It was explained that health education is essentially a process of communication whereby scientific knowledge about health is translated into desirable health attitudes, values and practices of the individual, his family and community, and the world at large.

Health education leads to a way of life and is dependent not only on health knowledge, but also upon an acceptance of a system of values. Whatever is taught aims toward the total development of the individual's personality - an indivisible entity, who must retain his integrated character as long as possible in the face of an adverse environment without losing his capacity for independence and self-help.

Phases of the school health programme

The panel discussion was on the following phases of the School Health Programme, namely: (1) Health Instruction; (2) Health Services; (3) Healthful School Living; and (v) School-Community Relationships. The phases have been classified only for the purpose of organizational and admistrative convenience. In a well-integrated School Health Programme, the functions of the different phases of the programme are interdependent and supportive of one another and are geared towards the optimum protection, promotion and maintenance of the physical, mental and emotional health of each school child.

Health instruction was defined as the formal, planned classroom teaching designed to prepare the pupils to make intelligent decisions on matters affecting their health. The desired outcomes of health instruction is not only to teach scientific, up-to-date information about health but greater emphasis should be given on the formation of desirable practices and attitudes among the pupils starting from kindergarten.

Generally, health instruction uses direct, correlated or integrated plans. The direct plan involves teaching health as a separate subject at a regular, designated time taught by a professionally prepared health education teacher. The trend is to teach health at a designated time for one semester or one year on a co-educational basis. Correlated teaching involves teaching with another subject, for example, Health and Science and Health and Social Studies. The concept of correlation in which one subject field is related to another subject field is in direct conflict with integration in which subject boundaries are ignored. The multidisciplinary approach to teaching health can be implemented in the primary grades where the homeroom still exists. The task of organizing health instruction involves organizing the scope and sequence of the health curriculum. Vertical organization refers to the curriculum from K-10 arranged so that learnings at one grade or maturity level build upon learnings at a previous grade or maturity level. Verticle organization also occurs in a single lesson in a unit or course where initial learning becomes the basis for subsequent learning and thus provide continuity. Horizontal organization

refers to the arrangement of learnings at a given grade or maturity level so that learnings are interrelated. The scope and sequence chart of the University of the Philippines Integrated School was presented to illustrate vertical and horizontal organizations of the curriculum in health education.

Health services cover the well-defined procedures that are established to:

1. appraise the health status of pupils and school personnel
2. counsel pupils, parents and others concerning appraisal findings
3. encourage the correction of remediable defects
4. assist in the identification and education of handicapped children
5. help prevent and control diseases
6. provide emergency service for injury or sudden illness.

Healthful school living denotes a social situation in which the child develops his potentialities in effective and enjoyable living. It is expressed in the atmosphere of the classroom, the corridors, the gymnasium, the playground, the school canteen, and every other place about the school that affects the physical, social, mental and emotional well-being. It was pointed out that school sites should be considered from the standpoint of accessibility, safety, quietness, cleanliness of the air, adequate drainage and recreation space.

The importance of fostering wholesome relationship between the school and community in order to bring about a successful implementation of the school health programme was emphasized. This need for coordination arises from the fact that forces in the school, home and community supplement one another in terms of functions and resources to influence the well-being of every school child. In this set-up, health education becomes a shared responsibility; hence, school children are assured of better health instruction, health protection and a healthful environment.

Efforts of the school to promote and foster this wholesome relationship include the following:

1. Organization of the school-community health council.
2. Monthly PTA meetings to discuss health issues and needs.
3. Visitation of parents to school to find out more about what their children are learning and doing and to help carry over health activities and projects of the school to the home and community.
4. Participation of parents and other people in the community in health surveys to discover health needs and problems in both the school and the community.

5. Periodic report to parents about the health status of children through any of the following: a) letters, b) PTA meetings and community assemblies, c) Face-to-face conference between teachers, parents and/or parents and the school service team (physicians, dentists, nurses).
6. A referral and follow-through programme for the correction and treatment of health problems.
7. Referral of students to health professionals for proper diagnosis and treatment.

Teacher observation

Teacher observation is a very meaningful and enriching function of effective teaching. Every teacher, through his close and continuous contact with pupils, occupies quite a unique and strategic position which enables him to uncover many of their health problems and needs better than any one else - even better at times than the busy parent or even a medical doctor who only sees the child occasionally or only when something has already gone wrong. In fact, a teacher's observation sometimes may provide the only means of discovering some health problems of school children. A teacher's observation of pupil health does not require any special skill or competency. A concerned teacher who values his pupil's health as his own, is the most critical, alert and effective observer of pupil health. In discharging his function, however, the teacher is not expected to be a diagnostician like a medical docotr but rather a suspectician who refers any child observed to have a health problem for prompt professional health care whenever possible.

The teacher observation should be regarded, therefore, not as an additional responsibility or task nor as an interference with a teacher's usual classroom functions, but rather as a refinement of his sensitivity to the health needs and problems of school children.

Screening tests

Screening tests are useful procedures in health appraisal which may uncover health problems not identified by observation of pupil appearance and behaviour. These tests are performed by teachers and nurses and they provide a preliminary evaluation of the state of development or functioning of various body organs.

Some screening procedures appropriate for school use include height and weight measurements, vision tests, muscle balance, hearing test, posture tests (for scoliosis). Such procedures especially vision and hearing tests are especially valuable because they deal with the senses fundamentally affecting pupils' ability to profit from school experiences. Weighing and measuring of pupils, although limited as a means of identifying pupils in need

of medical attention, also have significant educational values. They capitalize on pupil and parent interest in physical growth and provide a good opportunity for the teacher to discuss some of the characteristics of human growth and the factors which influence it. Such tests then, should be included in every school health programme.

Other screening procedures are not ordinarily included in school health services although they may be in a particular community under certain circumstances. A decision to add a specific screening device to the school programme by the school medical and public health personnel should follow a discussion of its need and value. For instance, schools in places where the incidence of tuberculosis is high, may upon the recommendation of local physicians, tuberculosis specialists and leaders in public health, include tuberculin tests for pupils in selected grades followed by x-ray examination of positive reactors. The introduction of new screening procedures into the school health programme should have the general approval of the local medical, public health and educational agencies.

Presentation and evaluation of instructional materials in health and nutrition education

Today, there are many materials available for use in teaching. This is due to the felt need of educators in enriching the learning experiences of children. Indeed, there is so much to learn in so little time, and experts say that 80 per cent of the information people get come from what they see. Therefore the use of visual aids is beyond question. Materials for instructional purposes are classified according to their kind and make as well as presentation. They help provide a variety of experiences.

Teachers, generally, seek for formulae on the preparation of materials needed in view of the very little time they can devote to do such creative activities. There are general steps to follow which can provide direction in the process: 1) identify the concept/objective for what is to be taught; 2) find out what are the specific components of the content to be emphasized in the lesson; 3) make a layout/sketch to show how the materials should look like; 4) gather the raw materials needed based on the sketch; and 5) execute the plan.

Materials, however, must be appraised in terms of how they can help in achieving objectives. They need to be evaluated also for their aesthetic appearance if they are intended to be effective and meaningful. There are guidelines to base our judgement for this.

Evaluation in health and nutrition education

Different techniques and corresponding instruments and/or tools are used in the evaluation of instruction as manifested in changes in the learners attitudes, values, practices and in the attainment of cognitive knowledge and skills based on specified objectives in health and nutrition education. The question that one needs to consider in any evaluation programme are: 1) why do we evaluate; 2) what do we evaluate; 3) whom do we evaluate; 4) when do we evaluate; and 5) how do we evaluate?

It is when we consider the question 'how do we evaluate?' that the techniques become important. Two types of techniques used in evaluation i.e., the clinical or subjective technique and the statistical or objective technique were considered. The subjective technique appears as being appropriate for measuring changes in the affective (including attitudes, values and practices) behaviour of the learner. The objective technique is more appropriate for measuring the attainment of cognitive (including knowledge, comprehension, application, analysis, synthesis and evaluation).

Steps that need to be followed in constructing teacher-made tests were demonstrated.

Values clarification as applied to health and nutrition education

Values control behaviour or stimulate activity and are therefore, norms or standards for decision and choice. At the present times when rapid technological growth and social changes are taking place, the individuals have particularly an increased need for sound values by which to guide their decisions and actions.

Every subject in our schools can be taught on any of three levels: 1) the facts level; 2) the concepts level; and 3) the values level. The goal of teaching on all three levels of instruction is to help students discern facts, make sense of them, and finally live by the meaning they perceive.

Instruction on the values level may be best achieved through values clarification strategies. Values clarification consists of three fundamental processes and seven behavioural steps:

A. Choosing

1. choosing freely
2. from alternatives
3. after thoughtful consideration of the consequences of each alternative

B. Prizing

4. cherishing, being happy with the choice
5. publicly affirming the choice, when appropriate

C. Acting

6. doing or acting out the choice, and
7. repeating the action with a pattern

Since values are determinants of health behaviour, health educators should provide opportunities for students to clarify their own values about health information and behaviour.

Guidelines for values-level teaching were presented as well as the advantages of values clarification to the student and to the teacher.

Annex I

LIST OF PARTICIPANTS

Malaysia	Mr. Thomas T. Oommen Principal Assistant Director of Schools (Health) School Health Unit, Schools Division Ministry of Education Kuala Lumpur
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Annex II

A LESSON PLAN IN HEALTH AND NUTRITION EDUCATION (Grade V)

by

Mrs. C.S. Salazar
Health Instructor, U.P. Integrated School

I. Area: Nutrition

II. Concept: Adequate diet is needed for bone growth

III. Objectives: At the end of the lesson the pupils will be able to:

1. discuss important facts about bones
2. identify food nutrients needed for the growth of bones
3. plan an adequate meal using a set of criteria
4. give wise suggestions on a faulty eating habit that affects bone growth
5. participate actively in group activities

IV. Lesson proper:

1. Opener - Grab Bag Activity. Get a piece of paper from the box. Tell something about the word written on it. Locate the bone in the skeletal system chart.
2. Lecture by Speakers - "To Tell the Truth". There are three speakers who will talk to you about the same topic. Each of them will try to convince you that he is the real Dr. Malakas. Listen carefully and then find out who the real doctor is. Here is your clue: the real doctor is the speaker who tells the truth.
3. Discussion: Who is telling the truth? What nutrients are needed for bone growth?

4. Group activities:

Group I - Based on Dr. Malakas' speech, your bones need some nutrients. Study this food record card. Listed below each nutrient is an example of food containing that nutrient. Add some more examples to the list.

Draw picture of these foods and present them to the class.

FOOD RECORD CARD

Vitamin C	Vitamin D	Calcium & Phosphorus
1. Guavas	1. Fish	1. Soybeans
2.	2.	2.
3.	3.	3.

Group II - Plan an adequate meal for lunch using the following questions as your guide (You may add some more questions if you like):

1. Do the foods contain vitamins and minerals needed for bone growth?
2. Can these foods be found easily in the market?
3. Are the foods you selected cheap?
4. Did you choose a variety of foods?
5. Did you include items from the three food groups?

Group III - Word search puzzle. The game contains more than 10 names of foods. Encircle each word that you find. Make a list of these words. If you were to group these words, which would be the first five in your list? Write them under O.K. group. Which would be the last five? Write them under No, thank you group.

egg	tomatoes	chippy	cake	monggo	beer
milk	mango	candy	bubblegum	beans	cola

Group IV - Role playing. Role play this situation: A seven-year old cousin of yours looks pale and weak. His meals consist mostly of what he only likes to eat such as rice, chocolates and candies. If he continues to eat this way, his bones will be affected badly.

You will not see him for a long time. His family plans to move to another city. He will be coming in about 15 minutes to say his goodbyes. If you were to make suggestions to improve his eating habits, what would these be?

5. Reporting and presentation

6. Evaluation

a) Complete any one of the following unfinished sentences:

1) I learned that I ...
2) I re-learned that I ...
3) I am happy to know that ...
4) I see that I need to ...
5) Now I know that it's O.K. for me to ...

b) Food Continuum (For Groups I and II) - On this strip of paper are written the words agree and disagree. This will be pasted on the board. If the object - that is shown to you is something which you like to eat, stay in front of the word agree; if not, stay in front of the word disagree. If you are not sure about your answer, you may stay anywhere between the two words.

milk	candy	bubble gum
coffee	squash	eggs

c) Either/Or (For Groups III and IV) - Look at the line on the floor. I will ask you some questions which you will answer by standing on any side of the line. Are you healthy or unhealthy?

strong	-	weak
beautiful	-	ugly
milk drinker	-	soft drinks drinker
meat eater	-	vegetable eater
quiet	-	noisy

d) Semantic Differential - Below are some words that tell something about foods good for bone growth. Each line consists of two words with numbers in between. If your answer is closer to the first word than the second, encircle the number near the first. For example:

MILK

GOOD 7 6 5 4 3 2 1 BAD

If you think milk is Good, encircle number 7 or 6. If not, encircle any of the numbers near the word Bad.

MILK

Cheap	7	6	5	4	3	2	1 Expensive
Delicious	7	6	5	4	3	2	1 Tasteless
Important	7	6	5	4	3	2	1 Not important
Not nutritious	7	6	5	4	3	2	1 Nutritious
O.K.	7	6	5	4	3	2	1 Not O.K.

GREEN LEAFY VEGETABLES

Cheap	7	6	5	4	3	2	1 Expensive
Delicious	7	6	5	4	3	2	1 Tasteless
Important	7	6	5	4	3	2	1 Not important
Not nutritious	7	6	5	4	3	2	1 Nutritious
O.K.	7	6	5	4	3	2	1 Not O.K.

SOFT DRINKS

Cheap	7	6	5	4	3	2	1 Expensive
Delicious	7	6	5	4	3	2	1 Tasteless
Important	7	6	5	4	3	2	1 Not important
Not nutritious	7	6	5	4	3	2	1 Nutritious
O.K.	7	6	5	4	3	2	1 Not O.K.

7. Assignment - Do any one of the following activities:

   a) "Ana Up-to-Date". Read the story. Fill in the blanks with the correct answer.
   b) Crossword puzzle. Prepare a crossword puzzle. Use 10 or more words which were included in our discussion today.
   c) Creative work. Write a poem or comic strip about the importance of good food to bone growth.
   d) Value sheet. Read the direction carefully.

Speaker A

I'm Dr. Bonifacio Malakas, call me Dr. Bone, for short.

There are more than 200 bones from the top of your head down to your feet. They may be little bones and big bones, flat bones and round bones, long bones and short bones. Each bone has the right size and shape to do its special work.

When you were a baby, your bones were made mostly of cartilage. There was very little calcium or other minerals in your bones.

As you grew older, your bones began to grow larger and stronger. Important minerals like calcium and phosphorus are taken from the digested food carried by the blood to help their growth. Most of the calcium comes from the milk you drink.

During your growing years, it is important for you to have a diet that includes not only milk but also foods from all the three main food groups.

If the bone cells are to build strong bones, for example, they must have plenty of vitamins C and D. Vitamin C is found in guavas, oranges, tomatoes, and leafy vegetables. Vitamin D comes from such foods as cod liver oil, some fish, and egg yolk. Vitamin D is made in the skin when the body is exposed to sunlight.

Minerals that are needed for bone-building, such as calcium and phosphorus, are found in fruits and vegetables as well as in milk.

Speaker B

I'm Dr. Bonifacio Malakas. You can call me Dr. Bone, for short.

You have more than 200 bones in your body. They are of different sizes and shapes.

Bones are made up mostly of the minerals, calcium and phosphorus which give them their hardness. If bones were made only of minerals they would be brittle and easily broken, so there is protein in bones too, so they will not be very stiff.

A baby's bones are not all fully formed when it is born. Some are still soft, clear cartilage. A new born baby has no hard bone in its wrist. A two-year old has two finished wrist bones, a five-year old has five; only by the time a child is twelve would the eight wrist bones have developed into hard, white bones.

The most important foods to eat are those with milk. Cakes, leche flan (custard) and candies made from milk should be taken in big amounts. The more milk you take, the harder and whiter your bones become.

Fruits and vegetables may help your bones to become strong. However, if you do not like these foods, do not worry. You may take them once a week or when you feel like eating them.

Another thing you must remember is to avoid the sun. The sun's heat may cause your bones to get brittle.

Do not forget this piece of advice - milk is for strong bones.

Speaker C

I'm Dr. Bonifacio Malakas. You can call me Dr. Bone, for short.

I would like to thank you for inviting me to your class today. I really like to talk to you, young children, about bones and how to keep them strong and healthy.

There are several types of bones - long bones, such as those in the legs and arms; short bones, such as those in the wrists and ankles: flat bones, such as the ribs, breastbone and skull; and irregular bones, such as those of the spine. All bones are hard on the outside.

When you were born your bones were made mostly of cartilage. As you grew older, your bones grew thicker.

By the time you become eighteen to twenty years old or so, hard bone cells would have replaced the cartilage. Then the bones can grow no longer, and you can grow no taller.

However, if you do not eat enough of the right kinds of food, the bone cells may be unable to replace the cartilage properly.

At this point, I advise you to eat seafoods. For strong bones, fish are the best, especially when you eat the bones, like in canned sardines and salmon. You may have a little milk or fruits if you care to eat them. Since most children do not like the taste of milk, seafoods will take care of your problem about bones.

U.P. Integrated School

HEALTH AND SCIENCE 5

Name _____ Date _____

Ana Up-to-date

Direction: Read the story. Fill in the blanks with the correct answer.

One sunny day, Ana left the house and ran as fast as she could to the woods. She saw a beautiful house and she entered it. Although meal was served, the house seemed empty. The food in the middle-sized bowl was really delicious.

She went upstairs to sleep but was attracted by a book. The first pages read "The framework of the body is called: (1)_____. It is composed of more (2) _____ bones. The skeleton has many functions, which are: (3) _____, (4) _____, (5) _____, and (6)_____. The skull protects the (7) _____, while the rib cage keeps the heart and (8) _____ safe. The red (9) _____ found in the long bones of the body makes the red and white (10) _____. Bones need minerals like (11) _____ and (12) _____ to keep them strong. They also need vitamins (13) _____ and (14) _____ found in (15) _____.

If you do not eat enough of the right kinds of food, the bone cells may not be able to replace the cartilage properly. For example, if there is not enough calcium in the bones, the cartilage will keep growing out toward the ends of the long bones. But hard new bone cells may not come from the bone shaft as they should, and the soft growing part will grow wider and wider.

Wide cartilage plates in the long bones are not strong enough to support the body well. Then the bones are likely to bend out of shape."

U.P. Integrated School

Name _____ Date _____

I. Value Sheet - Answer each question by encircling the letters. Use this guide: Y for yes; N for no; and M for maybe. Be honest with your answers. There are no wrong answers.

Yes	No	Maybe	Are you someone who .....?
			1. believes that food affects the health of bones?
			2. would like to see classmates buy soft drinks?
			3. will eat vegetables regularly?
			4. believes that selling junk foods in schools should be stopped?
			5. enjoys working with others?

II. Rank Order - For each question there are three choices. Rank your first choice number 1, the second 2, and the last 3.

1. Do you wish that the person who cooks at your home do any of these?

_____a. Boil vegetables for short time.
_____b. Fry foods less often.
_____c. Serve more raw foods.

2. Of the following who do you believe the most regarding information about foods and nutrition?

_____a. Classmates
_____b. Parents
_____c. T.V. Commercials

3. Which would you like the school canteen to serve more often?

_____a. Chocolate drinks
_____b. Fresh fruit juice
_____c. Milk

4. Which would you most want to control in your own drinking?

_____a. Coffee
_____b. Soft drinks
_____c. Tea

5. Which of these do you consider the most important effects of fruits and vegetables?

_____a. Smooth skin
_____b. Sparkling eyes
_____c. Strong bones

III. Fact and Fallacy - Some people still believe in fallacies or false ideas. Correct these fallacies by supplying the facts or true ideas.

1. Fallacy: Only young children need milk.

Fact: _____
_____
_____

2. Fallacy: Appetite is a safe guide in choosing a diet.

Fact: _____
_____
_____

IV. Thought questions:

1. If you were to select 10 or more foods rich in vitamins C and D, calcium and phosphorus, which five items would be first? Which five items would be last?

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

2. If you were to write a self-contract about ways to get as tall as heredity allows, what would it be like, I will ... or I hope to ....?

_____
_____
_____
_____
_____

APPENDIX A

Teaching and Training Units

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INTRODUCTION

The development of teaching and training units is a vital factor that contributes to the succes of any educational training programme. Realistic and functional teaching and training units will guide the programme trainers in health and nutrition education and in developing desirable knowledge, attitudes, habits and skills among the target groups in an organized manner.

It is for this reason that the various teaching and training units in health and nutrition education were developed by the various country participants during the Regional Writing Workshop on Health and Nutrition Education held at the College of Education, University of the Philippines, on 12-21 May 1983. Different areas in health education such as Personal Health, Disease Prevention and Control, Family Health, Safety and First Aid, Drugs, Alcohol and Tobacco, Consumer Health Education and Community Health were covered in the teaching and training units. Special emphasis, however, was placed on Nutrition Education since malnutrition is a health problem of priority concern among the different participating countries. Each teaching and training unit followed a format which include: (1) the title of the unit; (2) overview; (3) objectives; (4) teaching methods; (5) suggested learning activities; (6) resource materials; (7) evaluation; and (8) bibliography.

Samples of the teaching and training units have been arranged in alphabetical order according to the countries represented by the various participants.

I. TEACHING UNIT IN HEALTH AND NUTRITION

by I. Bhattarai (Nepal)

Title : Good Food Helps a Person Grow Healthy and Strong

Grade : Grade I

No. of Periods: 2 x 45 minutes

Overview

Food is important to us. Nobody can live without food. That is why good food during childhood is important because it is during the period of development that the child lays down the foundation for his future health. This is the time when the child needs adequate food to grow and build up his body. Food gives him plenty of energy for play and helps him fight common infections or diseases. Thus good food helps keep the child health, happy, physically fit as well as mentally alert. This is a good time for primary students to learn about the need for food. In this lesson, the students will realize the importance of food to health.

Objectives

At the end of this lesson, the students will be able to:

1. discuss why one needs food.
2. tell that eating dirty food will make us ill or sick.

Content

1. Food makes us strong to work and play.
2. Food makes us grow.
3. Eating dirty food will make us ill or sick.

Suggested teaching/learning activities:

Objective No. 1

1. Show the charts of various foods.

2. Ask the students the following questions:

   a. Why do you eat?
   b. When do you feel hungry?
   c. Do you eat snacks?

3. Show the picture of an animal at work or at play.

4. Compare the animal with a person in terms of need for food. Explain that our body cannot work without food in the same way as an animal cannot.

5. Relate personal experiences about:

   a. What you can do when you have eaten properly?
   b. What you feel when hungry?
      How you look when hungry?/when full?

6. Show the picture of a boy who is undernourished/ malnourished.
   Show the picutre of another boy who is well-nourished.
   Compare and contrast the boys' appearance.
   Ask the students the following questions:

   a. What is the difference between the two pictures?
   b. Who has a better appearance? Why?

7. Plant two identical plants near each other in the garden.

   a. Put fertilizer in one plant and water it regularly.
   b. Do not put fertilizer and water in the other plant.

8. Examine the two plants and discuss their progress regularly. What do the results show?

Objective No. 2

1. Show the two pictures of a sick child and a healthy child. Ask questions about the pictures:

   a. Why is this child sick?
   b. Can you tell why the other looks healthy?

2. Relate personal experiences about health habits before and after meals. Ask: What do you do before eating? Explain the reasons for washing the hands before and after eating.

3. Demonstrate the proper ways of washing the hands.

4. Make a short visit to a small store selling food stuffs. Observe how the foods are handled and how the foods are kept. Report what you have seen in the store.

5. Enumerate poor health habits that can make a person sick. Explain why you should not eat rotten and dirty foods.

6. Discuss in a small group that clean and properly cooked food is good for health.

Resource aids and materials

1. Chart of foods
2. Picture of animals
3. Picture of boy
4. Identical plants
5. Fertilizer
6. Water
7. Teacher guide
8. Pictures of sick child and a healthy child
9. Soap
10. Towel

Evaluation

1. Quiz - Explain why we eat.

2. Checklist

Put a check (√) if the picture can make you healthy and strong. Put a cross (x) if the picture can make you sick.

a) milk	b) egg	c) coffee
d) fish	e) candy	f) cigarette
g) meat	h) vegetables	i) fruits

II. TEACHING UNIT IN HEALTH AND NUTRITION

by I. Bhattarai (Nepal)

Title : Desirable Eating Habits are Important to Good Health

Grade : Grade I

No. of Periods : 2 x 45 minutes

Overview

One objective of nutrition education is to convey and disseminate simple, relevant and feasible messages to people in order to bring about some desired changes in their dietary and eating habits which will improve their status of health and nutrition. The food habits in different communities determine to a large measure the physical, mental and social health of people in those communities. Both the kind and the amount of food consumed are important factors which are involved. If people do not have enough to eat, they will obviously be hungry and thus become poorly nourished. But abundance of food in itself does not guarantee that they will be well nourished. Even when food supply is plentiful, people may suffer from hunger of a different type if they choose the wrong kind of food or if they develop the wrong concept and attitudes toward different kinds of foods.

The student of Grade I does not know what are desirable eating habits but at the same time it is very essential to impart knowledge about how to develop desirable eating habits. In this lesson, the students will develop the proper attitude towards desirable eating habits and improve their poor eating practices.

Objectives

At the end of this lesson, the students will be able to

1. explain the importance of chewing properly while eating.
2. discuss the importance of eating at the right time.
3. practice other desirable eating habits.

Health and nutrition education

Contents

1. Chew food properly to promote better digestion.

2. Correct eating time and its importance to health.

3. Handle food with clean hands and utensils.

Suggested teaching/learning activities

Objective No. 1

1. Put on the board the picture of a child who is eating properly. Put on the board another picture of a child who is eating his meal hurriedly. Ask students to make a comparison about the pictures. Which picture promotes good health?

b. Relate personal experiences when eating.

c. Explain why it is easier to eat when one sits properly.

d. Interview parents or teachers on why food should be chewed properly. Share with the class the results of the interview.

Objective No. 2

1. Recall why one needs to eat.

2. Ask students the following questions:

   a. When do you eat?
   b. How many times do you eat?
   c. What do you eat for snacks?

3. Survey the class. Find out:

   a. How many times they eat in a day?
   b. How many eat between meals?
   c. How many do not?

4. Share experiences during eating time in the morning and in the evening.

5. List the time you eat in a day for 2 days.

   Do it this way:

Day 1	Time
Breakfast	
Morning meal	
Snack	
Supper	

Day 2	Time
Breakfast	
Morning meal	
Snack	
Supper	

6. Listen to a story about the importance of a light snack.

7. Can you live without food?

8. Share experience about what one feels when he is hungry.

9. Explain that if one is hungry, one will not like to read, work or play or one will not have sound sleep and may get sick.

10. Listen to a resource person talk on the importance of eating at right time.

11. Listen to a resource person talk on the effect to health of sweet foods such as candies.

12. Discuss desirable eating habits that may be developed in eating (breakfast at 6-7 a.m., morning meal 8.30-9.00 a.m.; snacks at 1.30-2.00 p.m.; evening meal at 7.00-8.00 p.m.)

Objective No. 3

1. Ask students to draw the foods they usually eat.

2. List all the foods that are eaten in the morning.

3. Divide the class in three groups. Let them list down foods they like and dislike. Let the group report about foods which they like and dislike.

4. Survey the class about their favourite foods.

5. Show two pictures with two different meals: one having only rice and pulses and the other having rice, pulses, cereals, vegetables and fruits.

6. Explain the eating habits of one who only eats rice and pulses.

7. Listen to a resource person discuss the eating habits of different people belonging to the same family and community.

8. Dramatize that if people do not eat different kinds of food needed by the body they will become poorly nourished, weak and sickly.

9. Discuss in small groups why even if one has enough food to eat, he will not get the nutritious food needed for his health if he chooses the wrong kind of food.

10. Have an eating session in class. Let children observe the eating habits while eating.

Resources and materials

a. Pictures
b. Water
c. Foods
d. Survey form
e. Resource person

Evaluation

A. Observe children's reactions and behaviour during snack time in school.

B. Identify pictures that show good eating habits such as:

1. Washing hands before eating
2. Washing fruits and vegetables before eating
3. Chewing the food well
4. Eating at regular times
5. Eating different kinds of food.

II. TEACHING UNIT IN HEALTH AND NUTRITION EDUCATION

by Mrs. L.T. Juadiong (Philippines)

Title : Breastfeeding and Supplementary Feeding of the Baby

Grade : Grade VI (Home Economics)

No. of Periods : Six 80-minute periods or six days

Overview

An increasing number of mothers bottle-feed rather than breast-feed their babies due to the pressures and demands of modern living as well as the influence of extensive advertising.

In many rural and rurban (rural-urban) communities in the Philippines, girls tend to marry young. About 50 per cent of these girls do not go to school beyond sixth grade. This Unit, therefore, aims to help girls who will be prospective young mothers to acquire basic knowledge and skills as well as develop positive atittudes about breastfeeding which will help them for their role as mothers. This unit will also enable them to share desirable information and experiences regarding the importance of breastfeeding to other child-bearing mothers, in their respective communities.

Note to the teacher

Prior to the introduction of the unit, the classroom should be properly structured with bulletin board displays. A diagnostic test on the unit is given on the first day as a basis for enriching the teaching-learning situation and for measuring progress of the learners.

A prerequisite to this teaching unit are units on: (a) functions and sources of foods and the essential nutrients, (b) daily food requirements of family members, and (c) principles of total selection and meal planning.

Health and nutrition education

First and second days

Objectives

Given a series of experiences, the pupils will be able to:

1. explain the importance of breastfeeding.
2. discuss the disadvantages of bottle-feeding.
3. analyze the information presented in advertisements about breastfeeding and infant formula for bottle feeding.
4. discuss the desirable breastfeeding and health practices that a mother should observe.

Content outline

1. Why Mother's Milk is Best for Babies
2. The Value of Colostrum (first mother's milk) to the Newborn Infant
3. Disadvantages of Bottle-Feeding
4. Desirable Health Practices in Breastfeeding.

Suggested Learning Activities:

1. Library Work. Make a written report on why mother's milk is best for baby's health. Discuss it in class.
2. Describe colostrum. Comment on the practice of mothers of running the colostrum before they breastfeed their newborn infants.
3. Interview some mothers on the topic, "Why they bottle-feed their babies." List down the reasons for bottle-feeding and analyze them in class.
4. Library work. Make a written report on the disadvantages of bottle-feeding.
5. Observe and compare breastfed and bottle-fed babies in terms of appearance and activities.
6. Debate on the topic, "Breastfeeding versus Bottle-feeding."
7. Predict the health status of a bottle-fed and a breastfed baby in a given environment.

8. Clip samples of advertisements on breastfeeding and/or infant formula. Evaluate these advertisements.

9. Interview a nurse, a physician or a midwife on breast-feeding and health practices which a nursing mother should observe. Report the results of the interview to the class.

10. Write a composition on the importance of breastfeeding.

Resource aids and materials

1. Pictures of a breastfed baby and a bottle-fed baby.

2. Module on why mother's milk is important to the baby.

3. Samples of advertisements on breastfeeding and infant formula.

4. Pamphlets

   a) Breastfeeding - It's the Best for Your Baby (FNRI82-VCr-2(7) Reprinted, January 1972)

   b) Breastfeeding (Bulletin, Nutrition Foundation of the Philippines, Vol. 20, No. 2, March-April, 1980, pp. 6-9)

Evaluation

The teacher observes and records the changes in behaviour of pupils when they:

1. play the role of a nurse, midwife, teacher or nutritionist talking to a pregnant woman about the importance of breast-feeding; or advising a newly delivered mother on healthful breastfeeding practices.

2. complete the sentence "Mother, don't waste the colostrum because . . . . . ."

3. write a short paragraph on the topic, "Advertisements on baby food formula should be banned."

4. prepare sologans, posters on breastfeeding and health practices of nursing mothers.

The last two activities may be done in the Language Arts class with proper coordination with the teachers concerned. The written work and slogans will be submitted to the home economics teachers for evaluation.

Assignment

The teacher explains the assignment, gives the list of references and instructs the pupils on the following:

1. gather data on
   - How long a baby should be breastfed and when breastfeeding should be stopped.
   - If breastfeeding is not possible, what should a mother do?
   - What supplementary foods should be given to babies.
   - How to check if a baby is getting the right food.
2. observe/interview mothers on foods they give to their babies at specific ages.

Third to the fifth day

Objectives

Given a series of learning experiences the pupils will be able to:

1. discuss the length of time a mother should breastfeed; when breastfeeding should be stopped.
2. show how to prepare milk formula and the proper care of bottle-feeding equipment.
3. identify the supplementary foods for the baby at certain ages.
4. describe how to prepare and serve supplementary food for 4-12 months old babies.
5. explain how to check if the baby is getting the right food.

Content

1. How and When to Wean Baby from the Breast
2. Milk formula: What It Is, How to Prepare It, Amount needed by Infant
3. Proper Care and Handling of Bottle-feeding Equipment
4. Supplementary Foods for Babies, (4-12 months old) and How to Prepare and Serve Them

5. How to Modify Family Meals for Supplementary Feeding of Babies (4-12 months old)

6. Is Baby Getting the Right Food?

Learning experiences

1. Complete the following sentences on key ideas/concepts learned about breastfeeding:

   - I think .....
   - I hope .....
   - I'm happy .....
   - I wonder .....
   - I predict .....
   - I realize .....
   - I became aware .....
   - I enjoyed .....
   - I learned .....

2. Invite a resource person such as the school nurse, school physician or midwife to the class to discuss the following:

   - How long should a mother breastfeed?
   - When should breastfeeding be stopped?
   - Under what conditions is it usually not advisable to breastfeed an infant?
   - What should a mother do if breastfeeding is not possible?

3. Observe a midwife or a nurse demonstrate on the preparation of a milk formula and on the proper care of handling of bottle-feeding equipment.

4. In small groups, discuss further the results of the interview on the preparation of a milk formula and the proper care of bottle-feeding equipment.

5. Give reasons for providing the baby with supplementary foods.

6. Make a list of supplementary foods with their proper amounts that should be given to babies at different ages.

7. Compare the supplementary foods that a mother usually gives her baby with those recommended in terms of: a) kind, b) amount, and c) variety.

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8. Demonstrate to the class how to prepare and serve supplementary foods to babies from 4-12 months old.

9. Bring some foods usually included in the family meals and show how to modify them as supplementary feeding for babies.

10. Using the Reference Chart on Weights (Kg.) of Filipino children from birth to 24 months of age, show how to check if the baby is getting the right amount and kind of food.

11. Work in small groups and get the weights of babies (4-12 months old) from the rural health centre/unit. Observe how babies are weighed by the rural health nurse or midwife.

12. Compare the weights of specific age group in the line graph with the weights found in the Reference Chart. Do you think the babies are getting the right kind and amount of food?

Resource aids and materials

1. Materials for demonstration on preparing a milk formula.

   - canned milk or powdered milk
   - milk bottle with nipple
   - boiled water
   - clean water for working
   - cleaning materials and tools
   - local utensils for sterilizing
   - fuel and stove
   - teaspoon, tablespoon, measuring cup

2. Materials for weighing a baby

   - weighing scale preferably an inexpensive bar scale such as that used for Operation Timbang; or bar scale borrowed from market vendors

3. Charts

   - Reference Chart on Weights (Kg.) of Filipino children from birth to 24 months of age - (Based on FNRI Anthropometric Studies)

   - Supplementary Feeding for Breastfed Infants

4. Pamphlets

   - Feeding the Infant (Nutrition Fact Sheets 22A, 22B)

   - Breastfeeding (Nutrition Foundation of the Philippines, Vol. 20, No. 2 March-April 1980)

   - Your Baby's Food (FNRI-58-3(8) Reprinted February 1982)

   - Modification of Family Meals for the Supplementary Feeding of Breastfed Infants 4-12 Months Old

Evaluation

The teacher observes and records changes in the behaviour of the pupils when they

1. justify to the class the length of breastfeeding a baby and when to stop breastfeeding.

2. demonstrate to mothers during homeroom PTA meetings how to prepare a milk formula and how much a baby should take at a certain age.

   (Note: The teacher gives the group assignment and materials for the assigned project which she will collect, evaluate and keep for the culminating activities).

3. work in groups and plan a family meal for one day. Make a chart showing the modified family meals for the supplementary feeding of 4-12 month old babies.

4. using the data on weights of babies 4-12 months old gathered earlier from the rural health office, make a line graph of the weights by age group.

Assignment

The teacher explains the assignment; gives them a list of references and instructs the pupils to:

1. interview a breastfeeding woman on the kind and amount of food she eats in a day. If not available, ask your mother her daily meals when she was breastfeeding.

2. study the following topics:

   - Questions breastfeeding mothers ask about food (food fads and fallacies)

Health and nutrition education

- Effects of good nutrition before and during pregnancy on the mother and on the baby
- Why is there a need to eat more when breastfeeding?
- How can these increased food needs be met?

Sixth day

Objectives

Given a series of learning experiences, the pupils will be able to:

1. discuss the effects of good nutrition before and during pregnancy.
2. explain why there is a need to eat more when breastfeeding.
3. show how the increased food needs can be met.
4. realize that food fads and fallacies about eating certain foods during breastfeeding can affect the daily meals of a mother.

Content outline

1. Effects of good nutrition before and during pregnancy
   - on her as a mother
   - on her child
2. Why a mother needs to eat more when breastfeeding
3. The daily meals of a breastfeeding mother
4. Planning a menu for a breastfeeding mother
5. Food fads and fallacies about eating certain foods when breastfeeding.

Learning experiences

1. Summarize through discussion or role-play concepts learned on breastfeeding and supplementary foods for babies.
2. With the use of pictures, describe a non-pregnant/ pregnant woman who is in good health.

3. Discuss the effects of good nutrition before and during pregnancy

   - on the mother
   - on the baby

4. Predict the result on Aling[1] Tinay and on her baby if she was not in good health before and during her pregnancy.

5. Discuss in a small group why a mother needs to eat more when breastfeeding.

6. Show with the use of food cut-outs what the daily needs of a breastfeeding mother should include.

7. Play a food game by groups. In 3 minutes each group should be able to assemble the food that should be in-included in the daily meal of a breastfeeding mother.

   Rules of the game: Each member gets one cut-out of a food from a box containing food cut-outs and place these in a circle on the floor. Continue until the group has assembled all the required food cut-outs. The result is evaluated against the recommended daily food allowance of a breastfeeding mother. The winner is the first group to assemble all the recommended foods.

8. Interview a breastfeeding mother on the kinds and amount of food she eats. If not available, interview your mother. Ask on the kind and amount of food she ate when she was breastfeeding. Compare and evaluate these against the recommended daily food allowances for breast-feeding mother in terms of: a) variety, b) amount, and c) nutritional value.

9. Plan a menu for a breastfeeding mother using the Guide to Good Nutrition.

10. Explain how food fads and fallacies about eating certain foods during breastfeeding can affect the recommended daily meals of a breastfeeding mother.

11. Complete the sentence - If my mother were breastfeeding .....

---

1 A term used to address an older woman

Health and nutrition education

Resource aids and materials

1. Food cut-outs

2. Several samples of recommended daily meals for family members: breastfeeding mothers

3. List of the data gathered in an interview with breastfeeding mothers

4. Pamphlets:

   - Breastfeed - It's the Best for Your Baby, FNRI-1-82-VCr-1(6) Printed April 1981
   - Breastfeeding, Nutrition Foundation of the Philippines, Inc. November, 1978
   - Mga Dapat Malaman Tungkol sa Pagpapasuso, Inihanda ng Pambansang Paglilingkod sa Nutrisyon, Ministri ng Kalusugan, 1981 (What We should Know About Breastfeeding, Prepared by the National Nutrition Service, Ministry of Health, 1981)

Evaluation

The teacher observes and records the changes in behaviour of the pupils when they:

1. summarize through a skit/role-play the effects of good nutrition before and during pregnancy; and why there is a need to eat more when breastfeeding.

2. play "volleyball" by using as a ball, questions and answers on fads and fallacies about foods for breastfeeding mothers.

3. respond to the pencil and paper test on daily needs of breastfeeding mothers.

Assignment

List culminating activities on the unit which will be discussed in class.

Culminating Activities

The culminating activities provide the opportunities for

- the pupils to apply the knowledge and skills gained.

- the teacher to evaluate further the behavioural changes in the pupils, not only on the knowledge acquired but also in the attitudes and skills developed.
- the parents and other adults to develop awareness of the importance of breastfeeding.

Some activities are done in the course of the unit. Others are extension or continuing activities.

1. Preparatory activities

   - Putting up a bulletin board display along the school corridor, in the home economics building and in the Grade VI classroom. Selected charts, slogans, posters, essays made by the pupils in the study of the unit will be utilized.
   - Putting up exhibits such as posters, printed materials on breastfeeding; charts showing recommended daily meals for different family members, pregnant and breastfeeding mothers, supplementary food for babies; actual meals for the above target groups showing recommended kind and amount.

2. Open house

   If the unit is taken up in July, which is the month-long celebration of nutrition education in the country, an open house will be part of the school's activities for the celebration. Otherwise, it will be held to coincide with one of the monthly meetings of the homeroom PTA.

   Groups of Grade VI pupils hold demonstrations on the preparation of (1) milk formula and (2) the proper care and handling of bottle-feeding equipment. Other groups act as guides for guests.

3. Home visits

   This is a continuing activity of the girls which will be checked now and then by the teacher during the Home Economics period. Significant experiences of the girls will be shared in the class. The girls in small groups, visit pregnant/breastfeeding mothers and child-bearing women in their "purok" (village clusters of homes) to:

   - distribute pamphlets or leaflets on breastfeeding translated in the vernacular.

- demonstrate (when called for) on the proper care and handling of the bottle feeding equipment and the preparation of a milk formula.
- demonstrate how to modify family meals for the supplementary feeding of breastfed/bottle-fed infants (4-12 months).

Summative evaluation

Pencil-paper and performance tests on knowledge, attitudes and skills. The results will be compared with those in the diagnostic test.

Bibliography for teachers and pupils

Pamphlets/Leaflets

1. Breastfeed - Its the Best for Your Baby, FNRI 82-VC-2(7), Reprinted January 1982.

2. Breastfeeding, Bulletin Nutrition Foundation of the Philippines, Vol. 20, No. 2, April-March 1980.

3. Feeding the Infant, Nutrition Fact Sheets 22A, 22B.

4. Your Baby's Food (4-12 months old), FNRI-58-3(8), Reprinted

5. Meal Planning During Pregnancy and Lactation, FNRI-81-VCr-1(6) Printed April 1981.

6. Mga Dapat Malaman Tungkol sa Pagpapasuso, Inihanda ng Pambansang Paglilingkod sa Nutrisyon, Ministri ng Kalusugan 1981 (What We Should Know About Breastfeeding, prepared by the National Nutrition Service, Ministry of Health, 1981).

III. TEACHING UNIT IN HEALTH AND NUTRITION EDUCATION

by Miss L.C. Samson (Philippines)

Title : Food Selection in Relation to Health

Grade : Grade VI

No. of Periods : 7-8 days, 30 minutes a period

Overview

Nutrition is a basic factor in the physical and mental development of the child. Such development when thwarted will directly affect a child's behaviour and performance. It is the primary responsibility of teachers to make children aware of the fact that the quality of their food intake and eating patterns can affect their health. This teaching unit will help children to appreciate the need for proper food selection and eating patterns in order to prevent nutritional deficiencies which usually affect school children and youth.

General objectives

1. Develop understanding of the different food nutrients.
2. Understand the factors which influence food choices.
3. Develop the ability to make decisions in choosing the right kind and amount of food.
4. Develop desirable food and eating habits in relation to individual health.

Lesson 1

Objectives

At the end of the lesson the pupils should:

1. discuss the importance of eating a variety of foods for growth and development.

2. recognize the need for different food nutrients needed by the body.

3. eat a variety of foods during each meal.

Content outline

1. Importance of Eating a Variety of Foods

2. Sources of Food Nutrients

3. Essential Nutrients Needed by the Body

Suggested learning activities

1. Show a picture of a healthy child and a malnourished one. Let pupils react to what they see.

2. Discuss why food is important to the body.

3. From a chart, name foods that are rich in nutrients.

4. Talk about essential nutrients in a balanced diet.

5. Draw and label different sources of food nutrients.

Resource materials

1. Pictures

2. Articles from pamphlets, magazines

3. Chart illustrating foods rich in nutrients

Evaluation

1. Evaluate posters and check captions

2. Use of unfinished sentences

   - I believe that .....
   - I learned that .....
   - From now on .....

Lesson 2

Objectives

At the end of the lesson the pupils should:

1. discuss the basic function of each food nutrient.
2. show the relationship of good food to growth and health of children.
3. eat foods that are good for growth and energy.

Content outline

1. Three food groups
2. Functions of each food nutrient

Suggested learning activities

1. Socialized recitation - Functions of food in the body.
2. Buzz Session[1] "Snacks at school, uses of proteins in the body, etc."
3. Trip to a "talipapa" or market. Make a survey of foods found there. Classify the foods according to the basic nutrients found in them. Give the cost of foods.
4. Let pupil relate his/her experience in going with mother to market regarding the kinds of food she chooses to buy. Pupils should explain some of their choices.
5. Plan a day's meal

   Group pupils according to their own family size. Have each group plan a day's meal. Make a market list showing the amount and cost of each kind of food in the market list. (Example - 6 eggs = P3.60)
6. Talk about plants in the garden and animals they take care of which are sources of food nutrients.
7. Read references, pamphlets to gather information about vitamins, minerals and water

1. Buzz Session - A large class is divided into smaller groups composed of 5-6 members and discuss a specific topic. This is sometimes called a sub-discussion or cluster group which involves discussion for a specified period of time. This activity is effective in dealing with difficult questions, problems or controversial issues.

Resource materials

1. References, pamphlets, leaflets distributed by the FNRI
2. Local food products

Evaluation

A. Checklist

B. Values whip

1. What one wish do you have in life which may be affected by the lesson today?
2. What decision can you make based on the lesson today?
3. What is one thing you believe in strongly as a result of the lesson today?

Lesson 3

Objectives

At the end of the lesson the pupils should:

1. Identify the factors which affect eating habits.
2. analyze attitudes toward certain foods.
3. eat a balanced diet during each meal.

Content outline

1. Factors that influences children's eating practices.
2. Relationship of correct eating habits to health.

Suggested learning activities (Choose one or two for a 30-minute class)

1. Buzz group or panel discussion:
   - Different ways of selecting food
   - Eating patterns based on socio-economic factors
2. Invite a nutritionist to talk on proper food selection, eating habits and their relation to health.

3. Role play a situation showing boys and girls who like to eat nutritious foods.

4. Collect advertisements of food items from magazines and newspapers. Explain why boys and girls like to buy those.

Resource materials

1. Pictures

2. Posters

3. Pamphlets and other reference materials

Evaluation

1. I learned Statements.

   Example: I learned that .....

2. Problem-solving activities regarding factors that influence eating patterns of Grade VI pupils.

3. Observe childrens' choices of food in school cafeteria/ canteen or children's "baon" or packed lunch/packed recess snack.

Lesson 4

Objectives

1. Identify diseases caused by malnutrition.

2. Analyze the effects of malnutrition on the performance of children at work and at play.

3. List ways to prevent nutritional deficiency diseases which are common among children.

Content outline

1. Malnutrition and its effects on health

2. Common nutritional deficiency-diseases

3. Ways to minimize malnutrition problems

Health and nutrition education

Suggested learning activities

1. Analyze the two pictures previously presented in Lesson 1 of a healthy child and a malnourished child as a springboard for discussion.

2. Discuss the effects of malnutrition on the growth and development of children.

3. Film showing/slide presentation depicting children who are suffering from anemia, xerophthalmia, goiter, marasmus, etc.

4. Interview a nutritionist/pediatrician to find out which foods are good for preventing diseases like anemia, xerophthalmia, etc.

5. Create an awareness session on how to prevent malnutrition by citing solutions to this problem.

6. Discuss ways to prevent diseases like skin diseases and eye defects based on readings from local magazines, and handouts.

Resource materials

Films; Projectors; Pictures; Pamphlets, leaflets, handouts.

Evaluation

Observation of the behavioural characteristics and physical appearances of children to identify some deviations from normal health particularly those related to undernourishment. Make some referrals or recommendations.

Bibliography

Mitchell, Helen, Hendrika Pynbergen, Sinnea Anderson and Marjorie Dibble. Cooper's Nutrition in Helath and Disease. 5th Edition J.B. Lippincott Company, Philadelphia, Toronto. 1968.

Vanneir, Mary Helen. Teaching of Health in Elementary Schools. 2nd Edition Lea and Febiger Philadelphia. 1974.

_____, Health Your Happiness. Published by Philippine Publishing House Manila, Philippines

Pamphlets published by FNRI.

IV. TEACHING UNIT IN HEALTH AND NUTRITION EDUCATION

by Mrs. S. Ranatunga (Sri Lanka)

Title : Foods That Our Body Needs

Grade : Grade V

No. of Periods : 6 x 40 min.

Overview

This Unit aims to give an elementary understanding of the functions of food, the main nutrients of food, and an awareness of some of the common food items which are rich in these nutrients. The above ideas may have been already taught to some degree. At this stage it is useful to recollect these ideas and reinforce and expand them further.

Objectives

The student develops

1. the ability to state the main functions of food.
2. the ability to discuss the relationship between height, weight and age and to recognize its importance in determining the nutritional level of the individual.
3. the ability to identify the main nutrients provided by some of the foods available in their locality.
4. the ability to select a meal to include all nutrients.
5. an appreciation of the importance of a balanced meal.
6. the skills of measuring height and weight and to compare against standard values.

Content outline:

1. Functions and classification of foods
2. Foods are essential for growth and good health

3. How to measure height and weight correctly

4. How to plan and choose well-balanced meals

5. Normal and abnormal weight

Suggested teaching method

Ask the students questions such as:

- Why do we need food?

- What is the importance of food to your body?

Students may present answers such as to appease hunger or to grow bigger. Through a discussion, elicit the concept that growing bigger is growing taller and gaining in weight, and that an increase in both height and weight would occur if children are fed properly. Use Student Activity I to illustrate this.

Activity I: (Home assignment)

Read and explain the home assignment

Step I: Write this sentence on the dotted line.

Children grow taller as they grow older.

. . . . . .

Step 2: Measure the height of each of your brothers and sisters with a tape (or piece of string). Make a family line up along the outside wall of your house. Start with the youngest and go up according to age. (Note: If outside wall of the house is not suitable, teacher may suggest an alternative, such as a post, strips of paper, or other available method).

Step 3: Print the name of each child just below the height mark on the wall (do not spoil the wall). Keep these marks and find out a few months later if the children are growing.

Step 4: Answer the following questions about your family:

- Who is the shortest?
- Who is the tallest?

- Is your youngest brother or sister taller than the second youngest?

- Does each child grow taller as he grows older?

(Note to teachers: Please take note of the fact that rate of growth may not be even around the age of 12-16. Growth spurt for girls is between 9-12 years old. Growth spurt for boys is from 12-14 years. Hence for discussion purposes select samples from students whose siblings are younger than the student concerned).

Discussion:

By way of questions such as

- Was your younger brother/sister smaller than you?

- Was he/she bigger than the youngest in your family?

- Point out that there is a relationship between height and age, and weight and age of every individual.

- Explain that this can be used to measure the rate of growth.

- How do we measure heights and weights? Direct students to do Activity II.

Activity II: <u>To measure height and weight and to compare these with standard value for the same age range</u>

<u>Measurement of height</u> - Fix a tape against a wall so that the highest point is at 160 cm from the ground and the lowest point is at the ground level. Let each student stand erect against the tape and get another student to read his height. (A book, or any hard object maybe used to indicate the level. Remind each student to take off his shoes before standing. The teacher may demonstrate this procedure).

<u>Measurement of weight</u> - Use the weighing scale and get a student to read the weight. Remind each student to empty his pocket and wear light clothing. Students should record their weight and the date when they were weighed in the Student Record Book. (Note to teachers: With the help of students, plot two growth charts i.e. height/age & weight/age and hang them on the classroom wall with the date posted. At intervals of 4 months, do the measurement again and make necessary changes on the charts. (For each year 3 readings should be made).

Discussion:

Discuss the following with the students:

- Why are infants weighed in the hospitals as soon as they are born?

- Is there any relationship between weight and height and age of an individual?

- Does it differ or is it the same throughout the world? (Point out that this differs from country to country and even from community to community).

At the end of the discussion explain the purpose of growth charts and how they can be used to determine malnutrition of individuals. If possible get a copy of a growth chart from the local child welfare clinic and demonstrate its uses. At the end of the discussion elicit from students the concept that one of the main functions of food is to build up body tissues.

Inquire into the other functions of food in the following manner:

- How do we feel if we do not take meals for a long time? (Active or lethargic?)

- Does food help us to keep free from diseases? (Cite examples of constant colds among children. Show photographs or pictures of any form of Vitamin deficiency e.g. Bitot's spots in the eyes, toadskin on the epidermis, Rickets, etc.)

- Why do people living in cold countries need more fatty foods?

Finally summarize your lesson thus-

Functions of food

- to appease hunger.

- to build up body tissues and repair damaged parts.

- to provide energy for activity and to keep the body warm.

- to promote protection from disease.

With the help of students list out a large number of food items on the blackboard and get students to attempt to classify them into groups. They may group them into various categories such as

1. Fruits, vegetables and meats

2. Plant foods, animal foods, etc.

Explain that there is a better, more scientific classification based on the nutrients found in food.

e.g. Energy Foods - Carbohydrates) These provide energy
- Fats) for work and play

Grow Strong Foods - Proteins) These help the body to grow strong (strong muscles) and quickly repair itself after injury or sickness

Protective Foods - Vitamins) These protect us against
- Minerals) sickness

Explain that water, too, is an important factor although it is not a nutrient. Making use of the list of food items explain that most foods that we take may contain one or more of the above nutrients. Quote: e.g. such as milk, fish, meat, cereals, etc. Use Activity III.

Activity III: To classify food items according to their nutritive value

Get the students to bring samples of a large number of food items (If food items are not available make use of a list). Pictures and labels of tinned foods may also be used. Students may work in groups. Help them to group the food items according to their nutritive values. The list below would be made into a chart and hung on the classroom wall by each group.

Carbohydrates - Rice, rice-flour, wheat, cereals, potatoes, manioc (type of yam made into flour), yams, sugar, treacle.

Fats - Coconut oil, gingerly oil, ghee (butter fat), butter, margarine, cashewnuts.

Protein - Milk, eggs, beef, mutton, poultry, fish, dry-fish, soya-beans, greengram, cow pea (legume), dhall (lentils) cashewnuts, ground nuts.

Minerals	-	Milk and milk products, green leaves, meat, liver, fruits, eggs, fish, cereals, sprats, soya beans.
Vitamins	-	Fish, liver oil, carrots, fresh fruit, green leaves, liver, green-gram, cheese

Discussions:

Ask questions such as:

- What factors should be considered when preparing a meal which provide all essential nutrients?
- Should you take large quantities of one type or small quantities each of different types of food?
- Should each meal have different types of nutritive foods?

At the end of the discussion the students should know that -

1) A meal should be selected in such a way so as to include sufficient amounts of each type of nutrient.

2) Such a meal is termed a balanced meal.

What is the best way of acquiring such a meal? Direct students to Activity IV.

Activity IV: To select a balanced meal

Students may work in groups and each group should be assigned the task of selecting food items for a balanced meal - Breakfast, lunch, and dinner.

Students may use samples of food items or pictures of foods or cards representing the food items. They may select the cards to prepare the list for a balanced meal.

Discussion:

- Does it cost very much to prepare a balanced meal?
- Is there a way in which a balanced meal can be prepared cheaply?

Through questions of this type explain to students that every meal can be so selected as to provide a balanced meal at a very low cost.

Resource aids and materials:

1. Tape measure or piece of string
2. Charts showing standard height and weight
3. Chart showing main groups of foods
4. Weighing scale
5. Individual record card for height and weight
6. Chart showing food nutrients and their sources
7. Photographs showing cases of vitamin deficiencies
8. Food items, labels of canned foods
9. Magazines

Evaluation:

1. Prepare lists of balanced meals. In each leave out one food item which provides an important nutrient. Get students to fill in the lists so as to make up a balanced meal.
2. Question as to the age at which highest rate of growth occurs. Explain that the highest rate of growth is in childhood, hence, most amount of energy is needed at this stage. Get students to list out the types of food that should be consumed by individuals of that age group.
3. Paper and pencil test on nutrients, functions of food.
4. I learned ..... statements.
5. Composing poems, riddles, songs, posters, or speeches about the importance of food for growth.
6. Preparing menu guide for one day (three meals).
7. Performance test on the proper way of taking height and weight.
8. Record chart showing periodic changes in height and weight.

V. TRAINING MANUAL IN HEALTH AND NUTRITION EDUCATION FOR PRIMARY SCHOOL TEACHERS

by Miss P. Patoomsiri (Thailand)

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(b) Non-communicable diseases
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8. Safety and first aid 80

(i) Common accidents among school children

a) Home
b) School
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9. Training methods/techniques and aids 82

(i) Types of methods/techniques and aids in teaching health and nutrition education

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b. Group work
c. Demonstrations
d. Drama
e. Role playing
f. Community survey
g. Interviews with individuals
h. Problem solving
i. Skill practice study
j. Resource person

B) Aids

a. The written word
b. The flannel graph
c. Projected aids
d. Radio
e. Tape recorders
f. Charts, posters, wall newspapers, exhibits and models

(ii) Basic considerations for the selection and use of teaching methods, techniques and aids

(iii) Preparation, use and care of teaching aids

10. Evaluation 83

(a) Objectives of evaluation

(b) Evaluation in health and nutrition education

(c) What to evaluate and how to evaluate

Introduction

This Manual is to guide the trainers of primary school teachers in health and nutrition education. It gives a 5-day training course which can be appropriately implemented in a developing country.

The materials in this Manual have been organized into units which include: (a) the different subject areas of health and nutrition education; (b) the methods, techniques and aids; and (c) evaluation procedures that make the effective teaching of health and nutrition education. Each unit is complete in itself and the trainers may follow the order in the training resource/text or adapt the order to fit their own needs. For flexibility the training course may be divided into shorter or longer courses depending on the need.

The outline of this Manual presents a tentative training programme, training content and follow up. Each unit is made up of the name of the topic, objectives, content, method for training, teaching aids and evaluation.

The training content includes the following units:

Unit I. The importance of health and nutrition education

- Effects of health and nutrition problems on development
- How health and nutrition education can help economic and social development

Unit II. Basic knowledge on health and nutrition education

- The meaning of health and nutrition education
- Concepts, objectives and content of health and nutrition education in the primary school

Unit III. Nutrition and food

- Importance of food and nutrition
- A guide to good eating

- The principles of buying and preparing meals
- Food Sanitation

Unit IV. Personal health

- Physical, emotional and social changes that accompany growth and development
- Personal health care practices

Unit V. Consumer health

- Health information, health products and health services
- Guidelines for selection and use of health information, products and services

Unit VI. Common diseases among school children

- Communicable diseases
- Non-communicable diseases
- Prevention and control

Unit VII. Drug dependence

- Types of drug dependence
- Causes of drug dependence
- Harmful effects of drugs to health
- Prevention, control and treatment

Unit VIII. Safety and first aid

- Common accidents among school children
- Prevention of accidents
- First aid and treatment

Health and nutrition education

Unit IX. Teaching methods, techniques and aids

- Types of methods, techniques and aids in teaching health and nutrition education
- Basic considerations for the selection and use of teaching methods, techniques and aids
- Preparation, use and care of teaching aids

Unit X. Evaluation

- Objectives of evaluation
- Evaluation in health and nutrition education
- What to evaluate and how to evaluate

Statement of objectives:

1. To guide the trainers who will train primary school teachers in health and nutrition education.
2. To help the primary school teachers improve their teaching of health and nutrition education.
3. To develop instructional materials and teching aids in health and nutrition education for primary schools.
4. To promote good health and development among primary school children.

Tentative programme of the Workshop for training Primary school teachers in health and nutrition education

(5 days)

1st day

8.30 - 9.00 a.m. Registration

9.00 - 9.15 a.m. Orientation explaining the objectives of the workshop

9.15 - 10.00 a.m. Opening address

10.00 - 10.15 a.m. Break

10.15 - 12.00 noon	Short talk on Health and nutrition education in relation to national development
12.00 - 13.30 p.m.	Break
13.30 - 15.00 p.m.	Lecture/Discussion on nutrition and food
15.00 - 15.15 p.m.	Break
15.15 - 16.30 p.m.	Continuation of lecture/discussion

2nd day

8.30 - 10.30 a.m.	Lecture/Discussion on Personal health
10.30 - 10.45 a.m.	Break
10.45 - 12.00 a.m.	Lecture/Discussion on Consumer health
12.00 - 13.30 p.m.	Break
13.30 - 15.00 p.m.	Lecture/discussion on communicable diseases
15.00 - 15.15 p.m.	Break
15.15 - 16.30 p.m.	Lecture/Discussion on Drug dependence

3rd day

8.30 - 10.30 a.m.	Lecture/Discussion on safety and first aid
10.30 - 10.45 a.m.	Break
10.45 - 12.00 a.m.	Practicum on first aid and emergency care
12.00 - 13.30 p.m.	Break
13.30 - 15.00 p.m.	Teaching methods/techniques
15.00 - 15.15 p.m.	Break
15.15 - 16.30 p.m.	Visual aids and resource materials

4th day

8.30 - 10.30 a.m.	Preparation of lesson plan for teaching health and nutrition
10.30 - 10.45 a.m.	Break

Health and nutrition education

10.45 - 12.00 a.m.	Preparation of teaching aids
12.00 - 13.30 p.m.	Break
13.30 - 15.00 p.m.	Pre-conference Group demonstration on health Post-conference
15.00 - 15.15 p.m.	Break
15.15 - 16.30 p.m.	Pre-conference Group demonstration on nutrition Post-conference

5th day

8.30 - 10.30 a.m.	Lecture/Discussion on Evaluation
10.30 - 10.45 a.m.	Break
10.45 - 12.00 a.m.	Construction of evaluation instruments
12.00 - 13.30 p.m.	Break
13.30 - 15.30 p.m.	Plenary session, summative Evaluation and closing programme

1. The importance of health and nutrition education

Objectives

At the end of the unit, the teachers will be able to:

- explain the importance of health and nutrition education for economic and social development
- explain effects of health and nutrition problems on development

Content

- The importance of health and nutrition education for economic and social development
- Effects of health and nutrition problems on development

Methods of teaching

- Lecture-discussion
- Problem-solving (Health and nutrition problems)

Aids

- Movies, slides and filmstrips
- Charts and posters

Evaluation

- Pre-test and post-test
- Observation of teachers' interest
- Questionnaire/checklist
- Daily test

2. An overview of health and nutrition education

Objectives

At the end of the unit, the teachers will be able to

- explain the meaning of health and nutrition education.
- describe important concepts and objectives of health and nutrition education.
- explain the content of health and nutrition education in the primary school.

Content

- Meaning of health and nutrition education
- Concepts, objectives of nutrition education and health education
- Content of health and nutrition education in the primary school

Health and nutrition education

Methods of teaching

- Lecture-Discussion
- Invite a resource person
- Group Work (List concepts, objectives, and content in health and nutrition education for primary schools)

Aids

- Charts, posters
- Textbooks

Evaluation

- Pre-test and post-test
- Observation of the teachers' interest
- Finished work (Listing of concepts, objectives and content in health and nutrition education appropriate for primary schools)
- Daily test

3. Food and nutrition

Objectives

At the end of the unit, the teachers will be able to

- explain food composition, energy, nutrient requirements and common nutrition problems
- explain the practical methods which may be used to improve food consumption and nutrition
- explain and make a plan of daily balanced meals
- explain the principles of buying, preparing and cooking food
- explain the importance of food sanitation
- make a school nutrition programme and a school lunch programme.

Content

1. Importance of food and nutrition

(i) Functions of food. Your body needs food for three purposes:

a) to furnish energy
b) to build and repair body tissues
c) to regulate body processes

(ii) Essential nutrients. The substances in foods that serve these purposes are called nutrients. The nutrients used by your body are:

a) carbohydrates
b) fats
c) proteins
d) vitamins
e) minerals

Water and roughage are also needed by the body, although they are not nutrients.

2. A guide to good eating

(i) Effects of malnutrition

(ii) Food groups

a) milk group
b) meat group
c) vegetable and fruits
d) bread and cereals

(iii) Foods that should be eaten daily

The number of calories a person needs is influenced by height, weight, age, sex, exercise, work, season, climate and other factors.

(iv) Daily balanced menu

a) breakfast
b) lunch
c) dinner

(v) Foods that should be avoided

Health and nutrition education

3. The principles of buying and preparing meals

   (i) How to buy, prepare and cook vegetables

   (ii) How to select and cook meat

   (iii) How to buy and cook poultry and fish

4. Food sanitation

   (i) Proper handling and care of food

   (ii) Proper storage of foods

Methods of teaching

- Lecture and demonstration
- Discussion
- Group work

  a) Make daily balanced menu

  b) List guidelines for proper cooking and eating

  c) Make a school nutrition programme and school lunch programme

Aids

- Real objects or samples
- Charts, posters
- Slides and filmstrips, movies
- Textbooks

Evaluation

- Pre-test and post-test
- Observation of teachers interest and work
- Finished work (balanced menu; guidelines on proper cooking and eating, and school nutrition and school lunch programme prepared by teachers)
- Daily test

4. Personal health

Objectives

At the end of the unit, the teachers will be able to:

(i) describe the physical, emotional and social changes that accompany a change of age.

(ii) describe how to take care of oneself and to behave appropriately towards others at a time when there is a change of age.

Content

(i) Physical, emotional and social changes that accompany growth and development.

a) Physical, emotional and social changes

b) Physical, emotional and social needs

c) Building physical, emotional and social health

(ii) Personal health care practices

a) Care of the body parts

- Eyes, ears, nose, mouth, teeth and skin
- Lungs, heart

Methods of teaching

- Lecture
- Group discussion and decision
- Group work

a) make guidelines on personal health care

b) list personal health practices that should be done

c) make a school programme of personal health

Aids

- Slides and filmstrips, movies
- Charts, posters

- Real objects or samples
- Textbooks

Evaluation

- Pre-test and post-test
- Observation of teachers' interest and work
- Finish work
  a) Guidelines on personal health care prepared by teachers
  b) List of personal health practices that should be done
  c) School programme on personal health
- Daily test

5. Consumer health

Objectives

At the end of the unit, the teacher will be able to

- give information and examples of health products and health services in the community
- evaluate information of advertisements of health products and services that are or are not reliable
- explain the proper selection and use of health products and health services
- make a programme on consumer health for primary pupils.

Content

- Health products include foods, medicines, etc.
- Health services include community health service, quack doctors and folk medicine.
- Advertisement of health products and services.
- Guidelines for selection and use of health products and services.

Methods of teaching

- Lecture-discussion
- Group work
  a) Collection of advertisements of health products and health services
  b) Analysis and evaluation of health information given in newspapers, magazines, radio, etc.
  c) List health products and health services in the community
  d) List of things to do at school and at home to help pupils to become good consumers.

Aids

- Slides and filmstrips, movies
- Charts, posters
- Samples of health products and advertisements
- Textbooks

Evaluation

- Pre-test and post test
- Observation of teachers' interest and work
- Finished work (List of health products and services in the community; list of things to guide pupils to become good consumers).
- Daily test.

6. Common diseases among school children

Objectives

At the end of the unit the teachers will be able to:

- identify some diseases common among school children.
- describe the conditions, causes and ways of preventing and controlling the spread of diseases commonly found in the region.

Health and nutrition education

- make a school programme on disease prevension and control.

Content

1. Communicable and non-communicable diseases commonly found in the region: conditions, causes, ways of spread, prevention and control.

   i) Communicable diseases

      a. Viral diseases - Influenza, mumps, measles
      b. Bacterial diseases - Tetanus, Tuberculosis, Dysentery, Typhoid
      c. Insect-borne diseases - Haemorrhagic fever, Malaria

   ii) Non-communicable diseases

      a. Malnutrition (protein, vitamin, iron and other nutritional deficiencies)

Methods of teaching

- Lecture-discussion
- Teacher observation of pupils for signs of communicable and non-communicable diseases
- Group work

  a) Programme on prevention and control of diseases in school and at home

  b) Posters and slogans on disease prevention and control

Aids

- Slides and filmstrips, movies
- Charts, posters
- Real objects and samples
- Textbooks

Evaluation

- Pre-test and post-test
- Observation of the teachers' interest and work
- Finished work (School programme on disease prevention and control; posters, slogans on disease prevention and control)
- Daily test.

7. Drug dependence

Objectives

At the end of the unit, the teachers will be able to

- identify drugs which commonly cause drug dependence (physical/addiction: psychological/habituation).
- explain some causes of drug dependence and their prevention.
- describe the harmful effects of drug dependence to health and some of its social effects.
- name places for treatment of drug dependents.
- make a programme for prevention of drug dependence in school.

Content

- Types of drugs causing dependence: Alcohol, tobacco and the other drugs
- Causes of drug dependence
- Harmful effects of drug dependence to health and its social effects
- Prevention, control and treatment of drug dependence
- Programme for the prevention of drug dependence in the school

Methods of teaching

i) Lecture

ii) Group discussion

iii) Group work

a) find out about the laws regarding alcohol, tobacco and other drugs and explain the reasons for such laws

b) make a poster on drug prevention and control

c) list the name of places for treatment of drug dependents

8. Safety and first aid

Objectives

At the end of the unit, the teachers will be able to

- describe the importance of safety education and first-aid.
- explain the causes and prevention of accidents.
- describe what first-aid is and the different first aid measures during sudden injury or illness.
- practice first aid for some injuries.
- make a programme on first aid and safety education for pupils.

Content

- Common accidents among school children

a) Home

b) School

c) Work and play

d) Traffic

- First aid and treatment

a) Drowning

b) Bone injury

c) Cuts, scratches, wounds

d) Choking

- Transport of the sick or injured

Methods of teaching

i) Lecture

ii) Discussion

iii) Group work

a) List of things to do at school and at home to help prevent accidents and injuries

b) Write safety slogans and make posters

c) Practice first aid for some injuries

d) Make a safety programme for the school

Aids

a) Movies, slides and film

b) Overhead projector

c) Charts, posters

d) Real objects or samples

e) Textbooks

Evaluation

a) Pre-test and post-test

b) Observation of the teachers' interest and work

c) Finished work (list of things on how to prevent accidents at home and school; safety slogans and posters; safety programme for school)

d) Daily test.

9. Teaching methods, techniques and aids

Objectives

At the end of the unit the teachers will be able to:

- explain the types of teching methods, techniques and aids in health and nutrition education.
- select the appropriate teaching methods, techniques and aids in health and nutrition education.
- make some teaching aids in health and nutrition education.
- demonstrate the use of the teaching methods, techniques and aids in health and nutrition education.

Content

- Types of methods, techniques and aids in teaching health and nutrition education

  i) Types of methods and techniques

  a. Group discussion and decision-making
  b. Group work
  c. Demonstration
  d. Drama
  e. Role playing
  f. The community survey
  g. Interview with individuals
  h. Problem-solving
  i. Skill practice
  j. study

  ii) Types of aids

  a. Printed aids
  b. Visual aids
  c. Projected visual aids
  d. Auditory teaching aids
  e. Community resources
  f. The material service centre

- Basic considerations for the selection and use of methods, techniques and aids
- Preparation, use and care of teaching aids

Methods of teaching

i) Lecture

ii) Demonstration

iii) Group work

a) demonstrate some types of teaching methods and techniques in health and nutrition education

b) make some teaching aids in health and nutrition education

c) select the appropriate methods and techniques in teaching the various subject areas in health and nutrition education

Aids

a) Slides and filmstrips, movies

b) Charts and posters

c) Real objects, samples

d) Textbooks

Evaluation

a) Pre-test and post-test

b) Observation of teachers' interest and work

c) Demonstration by teachers on methods and techniques of teaching health and nutrition

d) Finished teaching aids prepared by teachers

e) Daily test

10. Evaluation

Objectives

At the end of the unit the teacher will be able to:

- explain the objectives of the evaluation
- describe the foundation for evaluation in health and nutrition education

Health and nutrition education

- describe what to evaluate and how to evaluate
- select and make the evaluation instruments in health and nutrition education

Content

- The objectives of evaluation
- Evaluation in health and nutrition education
- What to evaluate
  a) Knowledge
  b) Attitudes
  c) Practices and skills
- How to evaluate

  Measuring instruments
  a) Test
  b) Interviews
  c) Observations
  d) Questionnaire, checklist, inventory
  e) Rating scale
  f) Anecdotal and cumulative record
  g) case study
  h) Sociometry

Methods of teaching

i) Lecture

ii) Discussion

iii) Group work

a) select some evaluation instruments in health and nutrition education

b) prepare some evaluation instruments in health and nutrition education

Aids

a) Charts, posters

b) Real objects, sample of measuring instrument

c) Textbooks

Evaluation

a) Pre-test and post-test

b) Observation of teachers' interest and work

c) Finished work (samples of evaluation instruments prepared by teachers)

d) Daily test.

VI. TRAINING UNIT ON HEALTH AND NUTRITION EDUCATION FOR TEACHERS - PRIMARY SCHOOL LEVEL

by Mr. T.T. Oommen (Malaysia)

Title : Safety and First Aid -

Level : Pre-service teacher-education for primary schools

Duration : Six (6) x one (1) hour periods, including time for student's own assignments (surveys, creative work, etc.)

Overview

1. Rationale

People now live in a continuously changing and fast-moving society which is exposed to numerous hazards that affect their health and safety. In the years ahead, new technological developments together with further increase in mobility of people and man-made environment, and other factors, will undoubtedly increase the potentiality for hazards.

The potential for hazards and accidents exists whatever the environment, be it at home, at school, places of work, recreation, and on the street or highway. Every individual should be able to enjoy life to the fullest, with all its adventurous pursuits, but respecting the potential for hazards and avoiding accidents. He should institute measures for First Aid and Emergency Health Care, through proper planning, preparation and foresight.

In many countries, accidents have emerged as one of the top causes of death and injury. Youth and pre-adolscent children are particularly susceptible to accidents resulting from carelessness, recklessness, ignorance or, daring and adventurous pursuits.

The solutions to the reduction of hazards, prevention of accidents or minimizing the effects of such accidents lies in the proper application of human judgment, intelligence and reasoning, manifested through positive attitudes and behaviour.

Pupils in the primary schools and teachers in the pre-service training institutions, should be able to make sound choices and mature decisions concerning their safety and that of others. They should also be able to assume greater responsibility for their actions. The teachers in particular, should consider themselves as guardians of the health and safety of the pupils under their care.

2. Teachers' Role

a. Plan, implement and evaluate health education on Safety and First Aid in the primary school

b. Assist the relevant authorities in the implementation of safety measures and First Aid services in the school.

c. Co-operate with community agencies and organizations in the promotion of safety and the provision of First Aid Services in the school.

d. Provide leadership in the school and in the community, with regard to promotion of safety and prevention of accidents and the provision of First Aid Services.

Objectives

After having undergone training on health education pertaining to Safety and First Aid, the student teacher is able to:

- describe the dynamics of accidents resulting from the interrelationship of various aspects of human behaviour and physical environmental factors;

- realize and describe the safety precautions that will protect an individual and promote safety in a given situation at home, school, workplace, places of recreation and on the street/road/highway.

- comprehend that taking of safety precautions is promoted through the development of relevant knowledge, attitudes and practices in the learner as well as the institution and adoption of proper procedures for the use of various services and facilities and, the control and maintenance of the physical environment.

- describe the role of the various community agencies (public, private, voluntary) in the promotion of safety and/or the provision of First Aid in the school and in the community.

- accept the fact that while the prevention of certain accidents are beyond his control or that of any other individual or groups, he has a legitimate and relevant contribution to make with regard to the safety of other students in the teacher-training institution, pupils in the primary school and members of the community;

- demonstrate sensitivity to the dangerous aspects of the everchanging environment at home, the school/institution, places of work, recreation and on the street/road/highway;

- respect and is ready to support the efforts of all those involved in trying to promote safety and provide First Aid in the school, institution and in the community;

- apply reasonable safety precautions in his own daily living and set an example to others;

- identify and evaluate situations and conditions that have the potentialities for causing accidents at home, the school, institution, places of work, recreation and on the highways/roads/streets.

- render First Aid for minor injuries and burns in simulated or actual situations and/or cases.

- demonstrate the implementation of emergency measures at times of simulated and real accidents that commonly occur in the school or institution.

- plan a safety campaign and/or various measures for the promotion of safety in the school or institution.

Concept and content

The potential for hazards and accidents exists in all kinds of environment.

1. Accidents are caused by human and environmental factors and may result in injury, death and/or damage to property.

   a. Physical factors that contribute to or cause accidents at home, school, institution, places of work, and recreation, and on the road, highway or street (e.g. sharp edges; rough and uneven surfaces; slippery surfaces; substandard equipment and materials; poisons such as drugs, insecticides and germicides;

inflammable and explosive materials; poor lighting and ventilation; unsuitable clothing; age; health status; experience, etc.)

b. Mental and emotional factors that often contribute to accidents at home, school, institution, places of work and recreation and on the street, road or highway (rejection, boredom, anger, disappointment, worries, anxiety, etc.)

c. Social factors that contribute to accidents at home, school, institution, places of work and recreation, and on the street, road or highway. (Peer group pressures, overcrowding, economic conditions, etc.)

d. Damage to property and belongings (equipment, materials, vehicles, physical facilities, etc.)

e. Personal injuries (physical injuries, psychological and social repercussions, etc.)

2. Safe-living involves the development, enforcement and adoption of safety precautions and procedures, as well as the provision of First Aid and Emergency Health Care.

a. Standards and requirements with regard to the quality and quantity of equipment, materials, vehicles and physical facilities at home, the school or institution, places of work and recreation, and the street, road or highway.

b. Safety rules and regulations commonly applied to situations at home, the school or institution, places of work and recreation, and on the street, road or highway.

c. Emergency procedures and measures at times of accidents that commonly occur at home, the school or institution, places of work and recreation, and on the street, road or highway.

d. Simple First Aid and Emergency Health Care of accivictims. Cases that need immediate referral to and treatment in a clinic or hospital.

3. Some environmental conditions can be modified and their potential for causing accidents minimized, through the proper planning and implementation and evaluation of relevant programme or activities.

Health and nutrition education

a. Objectives, content, methodology and resources for teaching-learning on Safety and First Aid in the primary school

b. Objectives, content, strategies and resources for Parent Education on Safety and First Aid

c. Curriculum-support activities pertaining to Safety and First Aid in the primary school or institution. (exhibitions, competitions, fire-drill, first aid demonstration, etc.)

d. Various community agencies and organizations that are involved in Safety and First Aid and their roles with regard to education, enforcement, services, environment and community involvement and participation

Training methodologies

1. Short lecture-cum-discussion sessions to provide relevant orientations and guidelines

2. Screening of selected sound films and/or videotapes to supplement or complement lectures, to reinforce or summarize status or, to generate interest

3. Individual and group work on selected areas of concern utilizing documentary research, questionnaire, interview and observation technique(s).

   Example:

   a. Assessment of the prevailing physical, mental, emotional and social factors and conditions that have potentialities for causing accidents in selected:

      i) Homes (falls, poisoning, burns, electric shock, drowning, etc.)

      ii) Primary schools/teacher training institution

      iii) Places of work

      iv) Places of sports and recreation

      v) Streets, roads, highways

   b. Survey on common injuries sustained by primary school children/teacher

c. Survey and assessment of existing rules, regulations and procedures with regard to accidents at homes, schools and teacher-training institution, places of work, places of sports and recreation, streets, roads or highways, in a selected community.

d. Case studies on children undergoing treatment or rehabilitation for injuries sustained in accidents (precursors, knowledge, attitudes, practice, expectations for the future view of parents and peer-group members, etc.)

e. Development of scrapbooks on the relevant community agencies and organizations involved in Safety and First Aid.

f. Planning of safety measures (fire-drill, road traffic, pupil and staff movement, fire prevention, sports and games, etc.) for a typical primary school and teacher-training institution.

g. Development of a first aid kit (container, content, procedures) together with referral procedures for accident victims in a typical primary school and teacher training institution.

h. Planning, implementation and evaluation of a primary school and teacher-training institution exhibition or campaign on safety and first aid.

i. Planning, implementation and evaluation of a lesson/ a number of lessons on selected topics on Safety and First Aid for selected grades and age-groups at primary school level.

4. Teaching-learning activities involving student participation as a class.

Example

a. Seminar presentation on findings of individual and group assignments listed in 3.

b. Values clarification pertaining to the Students' stand, as individuals, on matters pertaining to their own safety, the safety of Primary School Children and the Community as a whole.

c. Role-playing with regard to helping children having behavioural problems that have potentialities to contribute to or cause accidents.

5. Discussions

a. Panel discussion by experts and practitioners with regard to the safety and accident prevention at the primary school and teacher training institutional level.

b. Group discussions in conjunction with activities listed in 3.

c. One-to-one discussion and counselling between teacher-educator and, students with behavioural problems of their own that have potentialities for causing accidents.

d. Buzz sessions on selected topics on Safety and First Aid in conjunction with lecture sessions in 1.

6. Demonstrations

a. Demonstrations by resource personnel and trainers on selected aspects of safety and first aid.

b. Loop-film demonstration on selected aspects of Safety and First Aid.

c. Student demonstrations on their creative efforts pertaining to Safety and First Aid.

d. First Aid Demonstration by trained personnel.

7. Written assignments

Individual written assignments on selected topics on Safety and First Aid to be completed and handed in by the end of the current course.

Resource

1. Human resources

Primary school pupils; other teachers; parents; personnel of relevant community agencies and organizations involved in Safety, First Aid and Medical Treatment; Trained First Aid Instructors, etc.

2. Money

Allocation of money for transport and travelling (including per diem) of students; purchase of materials to develop teaching aids; survey instruments; payment of guest lecturers and panel members.

3. Materials, equipment and facilities

Sound films and videotapes and loop-films on selected aspects of safety and first aid; transport vehicles; hardware for AVA; materials produced by individuals and groups during the course of training; others.

4. Management

Overall coordination of training; linkages with other areas of instruction and training; supervision for specific assignments; organization of group and mass activities; etc.

Evaluation

1. Entry-point evaluation (pre-test) of student teacher experiences and competencies (knowledge, attitudes, practices and skills)

2. Formative evaluation on training progress on class, group and individual bases pertaining to both input and output of teaching-learning activities

3. Summative evaluation (post-test) on student competencies (knowledge, attitude, practice) on Safety and First Aid

4. Summative evaluation on the training course itself (Objectives, content, methodologies, resources, management, etc.)

Note

The above training unit was prepared utilizing the author's experiences in the Malaysian Pre-service Teacher-Training Programme. However, a number of alternatives may be selected from the examples provided in order to suit conditions elsewhere. Owing to constraints in time and lack of access to reference materials available in Malaysia, no attempt has been made to list the Bibliography.

LIST OF SELECTED APEID PUBLICATIONS
RELATING TO HEALTH AND NUTRITION EDUCATION

* Curriculum for development; analysis and review of processes, products and outcomes; report of a Sub-regional Workshop. 1976

* Designing instructional materials for general education and teacher training: a portfolio of experiences in Asia and Oceania. 1980

* Towards better health and nutrition; report of a Technical Working Group Meeting. 1981

* Education for rural development – a portfolio of studies. 1982
(one of the five volumes is on health and nutrition education)

* Developing instructional modules for teacher education: a handbook. 1978

A series of self-learning and instructional modules in science. 1979-1982
(eight modules published)

Biology education in Asia; report of a Regional Workshop. 1980

Developing materials for biology teaching; report of a Sub-regional Workshop. 1982

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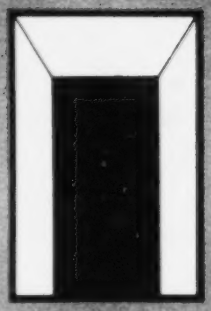
* Out of stock

The Asia and Pacific Programme of Educational Innovation for Development (APEID) has as its primary goal to contribute to the building of national capabilities for undertaking educational innovations linked to the problems of national development, thereby improving the quality of life of the people in the Member States.



All projects and activities within the framework of APEID are designed, developed and implemented co-operatively by the participating Member States through over one hundred national centres which they have associated for this purpose with APEID.

The 25 Member States participating in APEID are Afghanistan, Australia, Bangladesh, China, Fiji, India, Indonesia, Iran, Japan, Lao People's Democratic Republic, Malaysia, Maldives, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Samoa, Singapore, Socialist Republic of Viet Nam, Sri Lanka, Thailand, Tonga and Turkey.

Each country has set up a National Development Group (NDG) to identify and support educational innovations for development within the country and facilitate exchange between countries.

The Asian Centre of Educational Innovation for Development (ACEID), an integral part of the Unesco Regional Office for Education in Asia and the Pacific in Bangkok, co-ordinates the activities under APEID and assists the Associated Centres (AC) in carrying them out.

The programme areas under which the APEID activities are organized during the third cycle (1982-1986) are:

1. Universalization of education: access to education at first level by both formal and non-formal means;
2. Education for promotion of scientific and technological; competence and creativity;
3. Education and work;
4. Education and rural development;
5. Educational technology with stress on mass media and low-cost instructional materials;
6. Professional support services and training of educational personnel;
7. Co-operative studies and innovative projects of research and research-based experimentation related to educational development.